

EXPLORING LANGUAGE PRODUCTION PROCESSES

Assessing language processing through experimental tasks.

Rationale

- ❖ Cognitive methods of language comprehension have previously been observed through reading tasks. However, little research has been conducted surrounding language production.
- ❖ In addition to this, objective measures of reaction time have rarely been used in experimental language tasks.
- ❖ To fully comprehend the essential processes behind language production, additional research is required.



Aims

- ❖ This research aimed to close the previously mentioned literature gap through collection of novel data.
- ❖ This was done by utilising reaction times as objective measures of language production rates when typing.

Definitions

Close Probability (CP) tasks: participants are required to complete a sentence with a missing final word. Sentence completion words differ in level of anticipation (High CP – a single highly anticipated completion word, Low CP – no highly anticipated word).

Methodology

Seen by all - a sentence presented word-by-word:

Every autumn leaves fall from the...

(Block & Baldwin, 2010)

Sentence completion depended on the task type:

1 Cloze tasks



Free production of the completion word

2 Copy tasks



The completion word was presented, participants were required to simply copy it.

3 Picture tasks

The completion word was presented in picture form, requiring naming to complete the sentence



...Tree



(Rossion & Poirtois, 2004)

Participants:

- Women (50%)
- Men (45%)
- In another way / Prefer not to say (5%)

Measures

Two dependent variables:



Latency:

Time taken to start typing after all materials were displayed



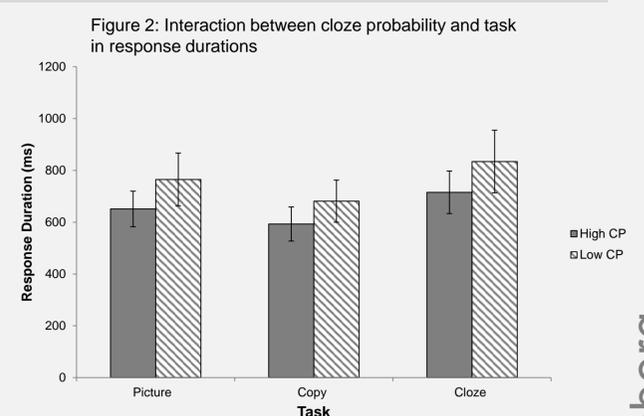
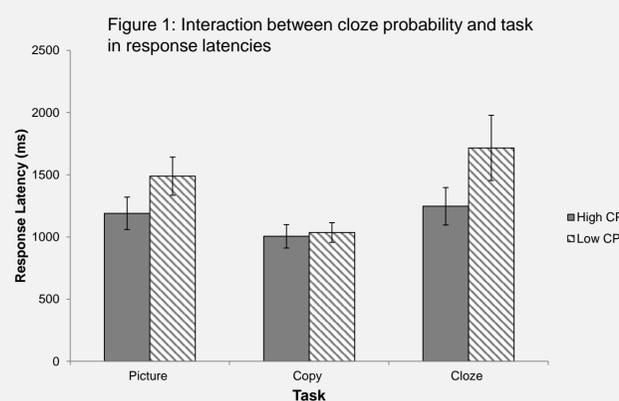
Duration:

The time taken to fully type the completion word

Results

Data showed both CP level and the task type affected response times.

This was found in both latency (figure 1) and duration (figure 2) measurements.



Conclusions

Results suggest linguistic processing is affected by task type and sentence predictability (high/low CP). Additionally, prediction prior to production may not occur when copying.

Results may have large implications in this area of linguistics and could potentially impact understanding of language processing through technology.

References

- Block, C. K., & Baldwin, C. L. (2010). Cloze probability and completion norms for 498 sentences: Behavioral and neural validation using event-related potentials. *Behavior research methods*, 42(3), 665-670. Doi: 10.3758/BRM.42.3.665
- Rossion, B., & Pourtois, G. (2004). Revisiting Snodgrass and Vanderwart's object pictorial set: The role of surface detail in basic-level object recognition. *Perception*, 33(2), 217-236. Doi: 10.1068/p5117